

REMARKS

Claims 1-9 are pending in this application. Reconsideration of the application based upon the following remarks is respectfully requested.

I. Rejection Under 35 U.S.C. §103(a)

Claims 1-9 are rejected under 35 U.S.C. §103(a) over Hiroko et al. ("Hiroko", JP 05-078289). Applicants respectfully traverse the rejection.

Independent claim 1 specifies, *inter alia*, a method comprising reducing a nitro group on the 2,2-dimethyl 2H-1-benzopyran compound of formula (1) with hydrazine in the presence of a metal catalyst to produce the aminobenzopyran compound of formula (2). Such a method would not have been obvious over the cited reference.

Hiroko discloses reducing the nitro group of its disclosed Formula 3 with hydrazine in the presence of a palladium/activated carbon or platinum/activated carbon catalyst to produce a compound represented by Formula 1 (Hiroko, paragraphs [0007]-[0009] and [0017]). The Office Action asserts that although the starting (and ending) compounds are different, they are analogous compounds and thus have analogous products. The Office Action also states that the use of analogous starting materials in a well-known process is *prima facie* obvious. The Office Action further states that there is no evidence in the specification or the prior art that any part of the starting reagents other than the NO₂ group is involved in the reaction process. Applicants respectfully disagree with the Office Action.

Formula (1) of the present claims contains a nitro group that is reduced with hydrazine in the presence of a metal catalyst. However, formula (1) of the present claims additionally contains a highly reactive olefin bond. The presence of the olefin bond can undesirably lead to the formation of by-product (5) when the olefin bond is broken rather than the nitro group being reduced, as disclosed in the present specification at paragraph [0038]. The method of the present invention is a non-obvious advancement over the prior art of making the desired

compound, because the claimed process effectively inhibits the formation of by-product (5) and thereby provides the desired aminobenzopyran compound in a very high yield. This occurs because the method of the present claims confers a high reaction selectivity on the nitro group of the 2,2-dimethyl 2H-1-benzopyran compound. Compounds of formula 3 of Hiroko are not analogous starting materials to compounds of formula (1) of the present claims, because Hiroko's Formula 3 does not contain a highly reactive olefin bond. Formula 3 of Hiroko contains only highly stable benzene rings. Thus, Hiroko's reaction does not have a side reaction that produces a similar by-product. In addition, nowhere does Hiroko teach or suggest that the disclosed reaction inhibits the formation of by-products by conferring high reaction selectivity on the nitro group. Hiroko thus fails to teach or suggest a method for producing an aminobenzopyran compound of formula (2), as claimed.

Given the teaching of Hiroko, it would not have been obvious to try to reduce the nitro compound of the present claims with hydrazine in the presence of a platinum or palladium catalyst because Hiroko does not teach or suggest a method of conferring a high reaction selectivity on the nitro group using a platinum or palladium catalyst, particularly when olefin bonds are also present. Thus, there would have been no motivation to try reducing the nitro group of formula (1) of the present claims with the metal catalyst and hydrazine of Hiroko with any reasonable expectation of success.

Claims 2-9 variously depend from independent claim 1. Because Hiroko fails to teach or suggest the features recited in independent claim 1, dependent claims 2-9 are patentable for at least the reasons that claim 1 is patentable, as well as for the additional features they recite.

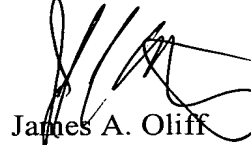
Accordingly, any combination of the cited references, fails to teach or suggest a method for producing an aminobenzopyran compound, as claimed. The reference thus would not have rendered obvious the claimed invention. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of this application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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